I have three pieces on insight to offer after taking the qual exam:

1. Know your audience
2. Explain the background and motivation
3. Know your fundamentals

**1. Know your audience**

I believe this is the most important takeaway I received from taking the qual. Because it’s likely that not all members of your committee will be knowledgeable in your field, it’s important to explain concepts at a level that the committee can easily understand. Think about it as if you are teaching the committee about a topic that they have never seen before and adjust your teaching strategy accordingly. For me I think the best approach would’ve been to start with a high-level overview and gradually moved into the specifics. Don’t make the mistake of assuming a committee member will know something that you would consider is common knowledge.

**2. Explain the background and motivation**

This ties back into the first point of knowing the audience. In my case, I was presenting on subvt memory and started immediately by explaining the benefits of subvt operation. Instead what I should’ve done was explain the application: highly energy constrained applications such as body sensor networks. This was the first question I got from the committee and I realized immediately that I hadn’t mentioned in it my presentation.

**3. Know your fundamentals**

This seems pretty obvious, but it’s something that I could’ve definitely improved on. You should be able to explain your results at a very low level. For instance, I was asked why active energy was equal to CVDD2 and was able to derive the equation, but was asked if energy stored on a cap was CVDD2, where does the other energy go. It’s simple things like this that you probably learned a long time ago and take for granted that you should study before going into the exam.